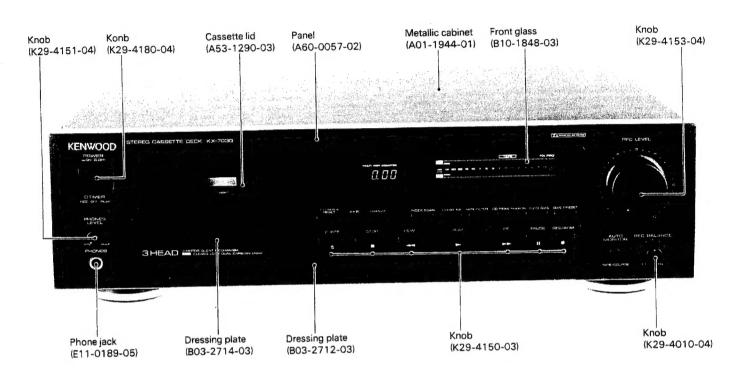
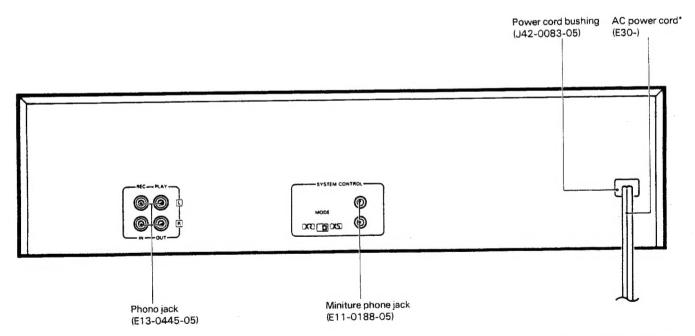
KX-7030 SERVICE MANUAL

KENWOOD

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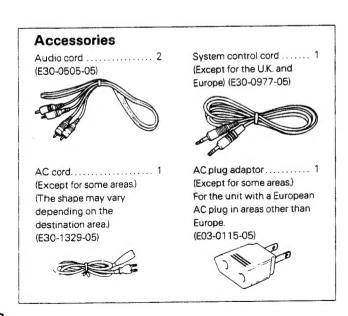


* Refer to parts list on page 39.

KX-7030

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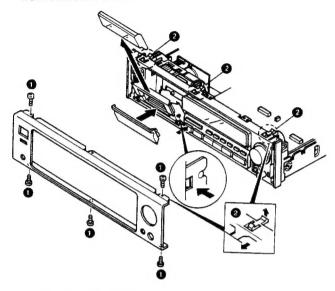
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DISASSEMBLY FOR REPAIR

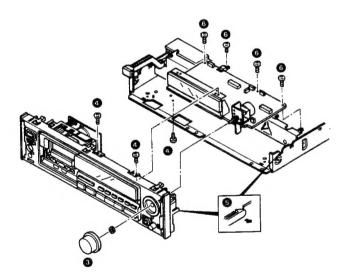
Remove the front panel

- 1. Remove the five screws 1
- 2. Remove the three claws 2 then remove the front panel.
- 3. Press the EJECT button, then detach the cassette lid from cassette holder.



Remove the display unit.

- 4. Remove the knob 3 and nut.
- 5. Remove the three screws and 4 two claws 6 then remove the sub panel.
- 6. Remove the four screws 6 then remove the display unit.

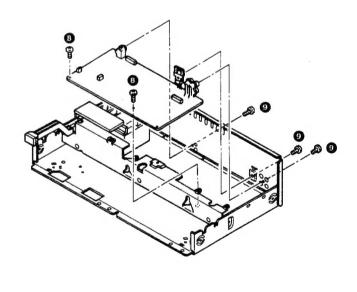


Remove the mechanism

7. Remove the four screws then remove the mechanism.

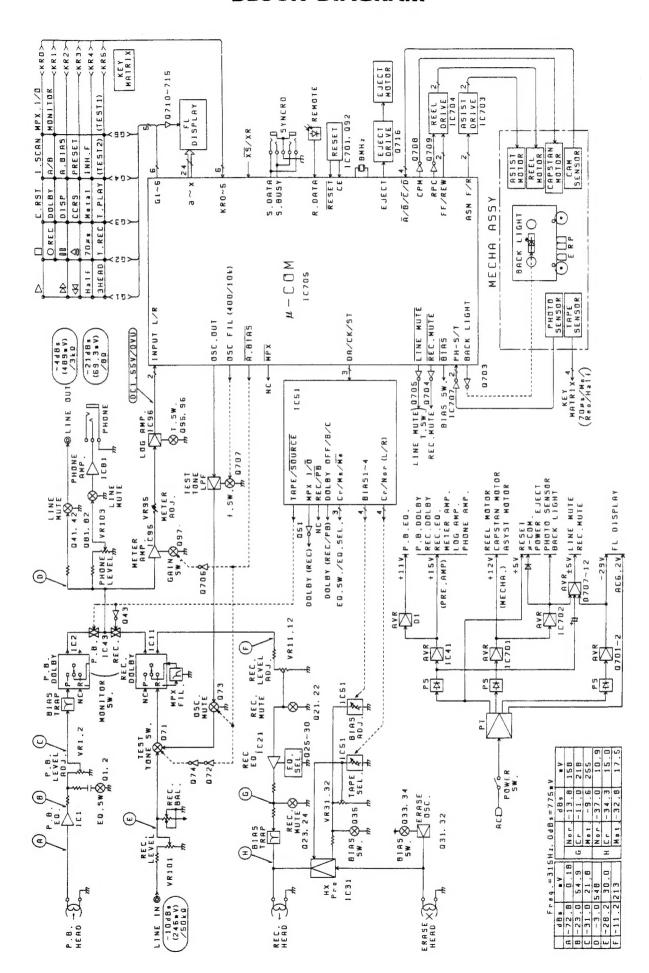
Remove the main PC board.

- 8. Remove the two screws 8
- 9. Remove the three screws 9, then remove the main PC board.



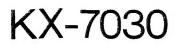
KX-7030

BLOCK DIAGRAM



Functions of Components Cassette unit (X26-125X-XX)

Parts No.	Parts Name	Use/Function	Operation							
		Playback equalization time	Playback equalization high-range time constant switching between 120 μs and 70 μs							
	or 2SC3311A	constant switching	ON: 70 μs.							
Q21,22	2SD 1302	SD 1302 REC MUTE Pin 13 (RM) of microprocessor IC705 goes high during off, and Q21 and Q22 turn off.								
Q23,24	2SC1740S	Playback equalization select (CrO ₂)	IC51 pin 8 (CrO2) goes high for CrO2 tape, and Q23 and Q24 turn off.							
Q25,26	2SC1740S	Playback equalization (METAL)	IC51 pin 10 (MET) goes high for metal tape, and Q25 and Q26 turn off.							
Q27,28	2SC1740S	Playback equalization peaking	IC51 pin 11 goes high for normal and CrO2 tape, and Q27 and Q28 turn off.							
Q31,32	2SD863	BIAS OSC	105 kHz is produced during recording.							
Q33	2SC3246	Bias power supply	Microprocessor IC705 pin 11 (BIAS) goes low during recording, Q34 turns off, Q33 turns on, and +B is applied to OSC for E. HX.							
Q34	DTC124ES	BIAS ON/OFF SW								
Q35	DTC124ES	HX slow start switch	Switch that starts HX OSC slowly during recording.							
Q41,42	2SD1302	L MUTE SW	Pin 12 (LM) of microprocessor IC705 goes high during recording or playing. Q705 turns off, and Q41 and Q42 turn off.							
Q43	DTC124ES	TAPE/SOURCE SELECT SWITCH	Q43 is turned on and off by IC51 pin 7 (T/S) to control IC43.							
Q45	DTC124ES	POWER ON MUTE	Mutes noise when the power is switched on.							
Q51	DTC124ES	MPX SW	Q51 is turned on and off by IC51 pin 22.							
			Q51 OFF → MPX FIL ON							
Q71	2SC1740S	TEST TONE SW	Controlled by IC705 pin 21 (A. BIAS).							
072	2SC1740S		Low during A. BIAS \rightarrow Q72: off, Q74: on, Q71: off							
Q73	2SC1740S		Q73 turns off, and the line input turns off.							
Q74	2SA130.9A	-	The output from OSC OUT goes to Rch of IC11.							
Q704	2SA1309A	RM drive	Q704 is turned on and off by IC705 pin 13 (RM), and Q21 and Q22 are turn on and off.							
Q705	2SA1309A	LM drive	Q705 is turned on and off by IC705 pin 12 (LM). Q95, Q96, Q81, Q82, Q41 and Q42 are turned on and off.							
Q706	2SA.1309A	LEVEL AMP SW	Q706 is turned on by A. BIAS, Q707 is turned on, and the gain of the ICS							
Ω707	2SC3311A	1	level amplifier is changed.							
Q708	2SC3246	CM DRIVE	Q708 is turned on and off by IC705 pin 25 (CPM). The capstan motor is als turned on and off.							
Q709	2SC3311A	RM SP SW	Q709 is turned on and off by IC705 pin 38 (RPC), and the reel motor speed controlled.							
Q710 ≀ 715	DTC113ZS	FL DRIVE	Fluorescent display (grid) drive							
Q716	2SC3246	EJECT MOTOR DRIVE	Q716 is turned on and off by IC705 pin 76 (EJECT), and the eject motor is controlled. ON: EJECT MOTOR ON.							
Q718	DTA113ZS	POWER ON MUTE	When the power is switched on, Q718 is turned on to turn recording mute on.							
IC1	TA8125S	PB EQ AMP								
1C11	HA12170NT		Changed between OFF, B, and C by the input to pin 5. The multiplex filter is turned on and off by the input to pin 26.							
	1	DEC EO ANAD	The multiplex litter is turned on and on by the hipse to purebase							
IC21_	NJM4565DD									
1C31	μPC1297CA		Power supply for the playback/record circuit.							
IC41	μPC7815HF	+15V AVR	Controlled by IC51 pin 7 and Q43, the tape and source are switched by IC6							
IC43	TC4066BP	TAPE/MONITOR SWITCH	pins 5, 6, 12, and 13.							



Parts No.	Parts Name	arts Name Use/Function Operation						
IC51	TC9164N	FUNCTION switch	See circuit description on page 10.					
IC81	M5218AL	H.PHONE AMP.						
IC95	NJM4565DD	METER AMP.						
IC96	BA6138	LOG AMP.						
IC701	μPC7812HF	+12V AVR	Power supply for the mechanism					
IC702	μPC7805HF	+5V AVR	Power supply for microprocessor, remote controller, and resetting					
IC703	BA6209	AM DRIVE	Normal and reverse rotation is controlled by pins 2 and 10.					
IC704	BA6229	RM DRIVE	Pins 2 and 10 control the direction of rotation, and the voltage at pin 4 controls the speed.					
IC705	CXP82124- 1036	μ-com	See circuit description on page 12.					
IC707	BA10393N	Reel pulse amplifier						
			When the power is switched on, Q92 is turned on for resetting.					



Description of Operation

Key name		Function	Display				
FWD PLAY	If there is a cassette in forward direction.	the drive, it is played back in the	Linear counter				
FF ▶▶	The tape is wound onto	the right-hand reel at high speed.	Linear counter				
REW	The tape is wound onto	the left-hand reel at high speed.	Linear counter				
STOP	All operations are stopp	ed.	Linear counter				
REC/ARM ●/◆	Starts recording. If recording is in progres	ss, ARM starts.	The REC indicator (●) lights. The indicator flashes during ARM and lights when ARM ends (■■●).				
PAUSE	Recording pauses (REC PAUSE).	PAUSE) or playing pauses (PLAY	The PAUSE indicator (■■) lights.				
COUNTER RESET	Resets the linear coi Maintains 0.00 while Stops when this key Invalid during DPSS	e the key is held down. is pressed during zero stop.	Linear counter				
DOLBY NR.	Switches the Dolby nois	se reduction. OFF \rightarrow B \rightarrow C	OFF B DOLBYNR B C DOLBYNR C				
DISPLAY	Switches display.		All display → Counter only → (The operation from the counter is automatically performed if another key is pressed.)				
CD peak search	CD peak search star CD high-speed sampling		REC PAUSE indicator				
MPX FILTER	MPX FILTER ON/OFF	2	The MPX indicator lights or goes off.				
A/B REPEAT	Playback the part betwee playback) When the key is first protection the key is pressed again REWIND is pressed, played repeated 16 times.	Repeat A►B Counter indicator					
	If another key is pres After the specified part normal playback returns It must take at least 10	Number of playbacks					
AUTO BIAS	Auto bias on/off key		AUTO BIAS flashes. → Lights.				
BIAS PRESET		The current optimum bias value is stored in memory.	AUTO BIAS → BIAS PRESET Flash → Light				
		The optimum bias value is recalled from memory.	2. BIAS PRESET Flash → Light				

DPSS mode

Name	Key operation	Description
INDEX SCAN	INDEX SCAN key Counter indicator III II I Number of playbacks	The beginning of each track is played for about 10 seconds.
Zero stop	FF + STOP REW + STOP	Stop when the counter reaches 0.00.



Name	Key operation	Description (The description in parentheses is for reverse playback.)					
Fast forward search (skip track selection)	Press the FF key during forward playback.	Skips forward (relative to the playback direction) the number of tracks (up to 16) equivalent to the number of times the FF key is pressed.					
	Counter indicator III III Number Number of of key tracks presses	If the the FF is pressed during fast forward search, the number of times the key is pressed is added to the number of tracks to be skipped.					
Rewind search (skip track selection)	Press the REW key during forward playback.	 Skips backward (relative to the playback direction) the number of tracks (up to 16, including the current track) equivalent to the number of times the REW key is pressed. 					
		If the REW key is pressed during rewind search, the number of times the key is pressed is added to the number of tracks to be skipped.					
One-track repeat	Press the PLAY key again during	The current track is played 16 times, the normal playback returns.					
	playback, or press the PLAY key twice during an operation other than playback.	If the PLAY key is pressed again while a track is being repeated, the track is repeated 16 times from that time.					
	Counter indicator						
	. 🛛 🗇	·					
	Number of playbacks						
Rewind play	Press the REW and FWD PLAY keys together.	 When the REW and FWD PLAY keys are pressed together, the tape is rewound to its end (RWD), and then a fast forward search is done on the forward side. When the first track is detected, playback starts. If the FF and RVS PLAY keys are pressed together, the tape is fast-forwarded to its end, then a fast forward search is done on the reverse side (B). 					
Dash & Play	Press the FF and REW keys	Plays back in the current tape direction.					
	One-side full repeat for undirectional models	Cues and searches for the next track if a blank section continues for ten seconds during playback. If a track is found, it is played back.					
	Counter indicator						
	<i>II I</i> I.						
	Number of playbacks						
Rerec standby	Press the REW key during forward recording.	• If the end of a previous track is found by reviewing (RVW), the tape is stopped two seconds before the end.					
Auto rec mute	Press the REC key during normal recording.	Turn REC MUTE on for four seconds, record, and then record pause.					

Auto-bias operation

 The deck must be stopped and contain a tape that can be recorded on.

1) Bias select

 Feed unrecorded tape for ten seconds to skip the leader tape.

Changing the bias values in order, starting with the largest, record 400-Hz and 10-kHz signals alternately, and monitor them at the same time. The point where 10 kHz (level) \geq 400 Hz (level) is the optimum value, and is stored in memory and output.

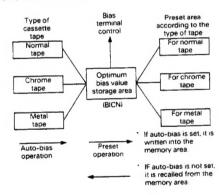
2 HEAD

Feed	REC	RWD	PLAY	RWD
10 sec	16 sec	2 sec	16 sec	2 sec

2) Bias preset

When the auto-bias operation is performed, the optimum bias value is stored in the current memory area (BICN).

(a) Since there is only one area regardless of the type of tape, if the auto-bias is set and the type of tape is changed, the optimum bias value will be wrong. So the auto-bias needs to be set again or a preset value needs to be recalled.



(b) A preset value is recalled to solve the problem described in (a).

The preset condition is backed up and is not erased by switching the power on or off. If presetting is turned on, the optimum bias value for the type of tape is always recalled from the preset area. So recording can be always done with the optimum bias value when the tape is changed or timer recording takes place.

4. Operation canceling

- (a) If auto-bias is set and the AUTO BIAS key is pressed, the previous optimum bias value is cleared, and the initial setting (center value) is recalled.
- (b) If bias preset is off, and the BIAS PRESET key is pressed, the initial setting is recalled.

Test mode

1. Test mode setting

Short pin 3 to pin 4 with a diode, and switch the power on.

2. Test mode cancel

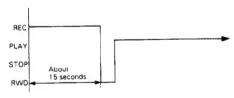
The test mode is exited when the PAUSE KEY is pressed.

3. Test mode

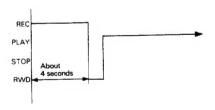
- (1) All indicators on: All indicators light 500 ms after the power is switched on, and stay on for about 1.5 seconds. When all the indicators go off, key inputs are accepted.
- (2) Mechanical switch display: The condition of each mechanical switch is desplayed on the level meter section when LINE MUTE is on.

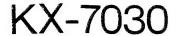
R.REC INH	CrO ₂	METAL	F.REC INH
+1 dB	+3 dB	+7 dB	+12 dB

- (3) Direct change: Playback is changed directly to recording.
- (4) Timer play: When the timer switch is set to PLAY, playback starts in the shortest possible time (about two seconds).
- (5) Timer recording: When the timer switch is set to REC, recording and playback take place automatically as shown in the following timing chart.



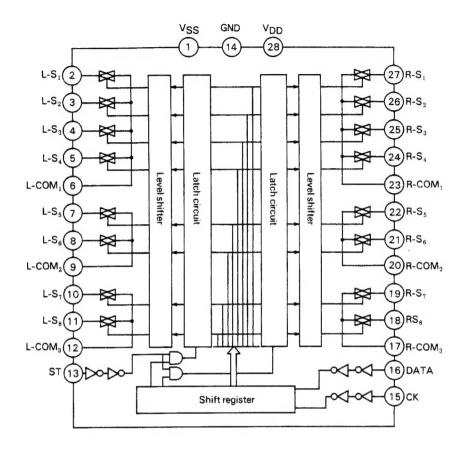
- (6) CCRS: When the CCRS key is pressed, serial code "CCRS start" is output, then REC PAUSE is made effective.
- (7) Four-second recording: When the REC key is pressed, recording is done for four seconds, then the recorded part is played back from the beginning.



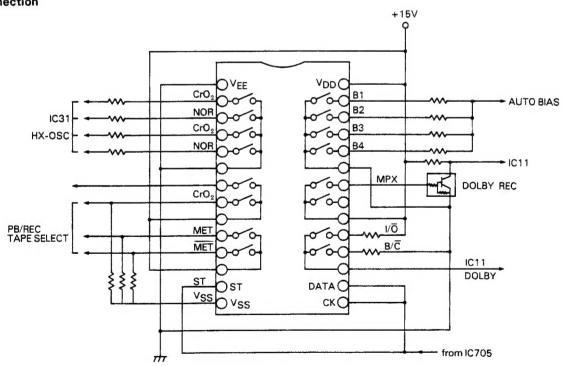


Analog function switch array IC (TC9164N)

Block diagram



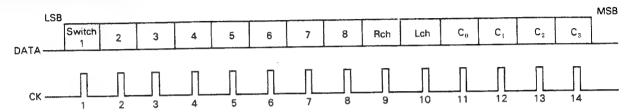
Pin connection



Description of Operation

Data input

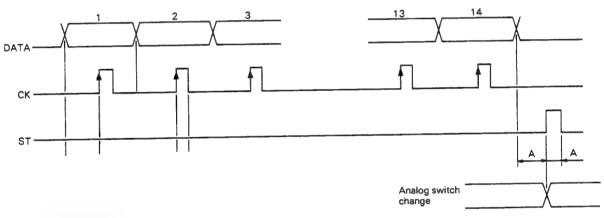
The TC9164N can control each analog switch by supplying appropriate data to the DATA, CK, and ST pins. Data consists of 14 bits, as follows:



Bits 1 to 8 correspond to analog switches 1 to 8. Set the bit corresponding to the switch to be turned on to 1. Bits 9 and 10 specify the right or left channel.

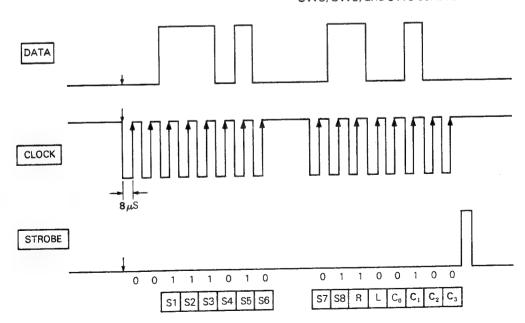
Bits 11 to 14 are code bits used to select chips. (0100 for the TC9164)

Data input to DATA is input to the internal shift register on the rising edge of the CK input signal. The input data is finally transferred to the latch circuit from the shift register with the ST signal, and the old data is replaced by the new.

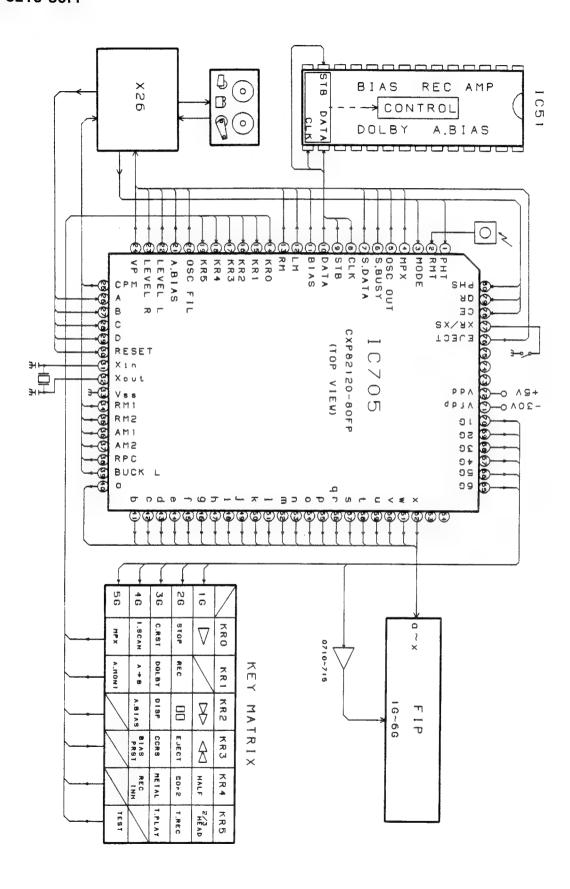


Example of transfer timing chart

The above clock waveform is for 16 bits, but the first two bits are invalid. In this example, the R side of SW1, SW2, SW3, SW5, and SW8 conducts.

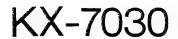


CXP8210-80FP



Pin Description

in No.	Pin name	1/0	Name		Description	
1	PE3/INT3		PHOTO IN T.		Photosensor takeup side	
2	PE4/RMC	1	REMO IN.	1	Remote control signal input pin	
3	PE5	1	M. MODE		Mechanism operation mode identification	H: KX-7030 L: OTHER
4	PE6	0	MIX		MPX FILTER ON/OFF	H: OFF L: ON
5	PE7/TO	0	DSCOUT		Internal oscillator output pin for auto-bias 400 Hz or 10 kHz	
6	PB0/CINT	1/0	SBUSY		Synchronizing pin for external equipment	
7	PB1/CS0	1/0	S.DATA		Synchronizing pin for external equipment	
8	PB2/SCK0	0	CLK		Selector IC drive pin	
9	PB3/SI0	0	ST		Selector IC drive pin	
10	PB4/SO0	0	DATA		Selector IC drive pin	
11	PB5/SCK1	0	BIAS		Bias generation on/off during recording	H: OFF L: ON
12	PB6/SI1	0	LINE MUTE		Line mute	
13	PB7/SO1	0	REC MUTE		Rec mute	
14	PC0/KR0	1	KR0		Key return	
15	PC1/KR1		KR1		Key return	
16	PC2/KR2		KR2		Key return	
17	PC3/KR3		KR3		Key return	
18	PC4/KR4	1	KR4		Key return	
19	PC5/KR5	ı	KR5		Key return	
20	PC6/KR6	0	OSC FILTER		Switching filters for internal oscillation	H: Line L: Internal
21	PC7/KR7	0	A. BIAS		Switching input for auto-bias	H: Line L: Internal
22	PA0/AN0		LEVEL Lch		Level input pin Lch	
23	PA1/AN1		LVEL Rch		Level input pin Rch	
24	PA2/AN2	1	VOL POSITION	١		
25	PA3/AN3	0	Sankyo mecha CPM	nism	Capstan motor control	
26	PA4/AN4	1	ROTARY SW	Ā	Cam position detection switch for Sankyo mechanism	
27	PA5/AN5	1		B	Cam position detection switch for Sankyo mechanism	
28	PA6/AN6	1		Ē	Cam position detection switch for Sankyo mechanism	
29	PA7/AN7	1		D	Cam position detection switch for Sankyo mechanism	
30	RST	1			Reset input pin	
31	EXTAL	1			Oscillator connection pin	8.0 kHz
32	XTAL	0			Oscillator connection pin	
33	Vss				Power connection pin	
34	PD0/S0	0	FF		Reel motor control	
35	PD1/S1	0	REW		Reel motor control	
36	PD2/S2	0	ASM1		Assist motor control	
37	PD3/S3	0	ASM2		Assist motor control	
38	PD4/S4	0	RPC		Reel motor speed control	H: PLAY L: Other
39	PD5/S5	0	VOLLED			



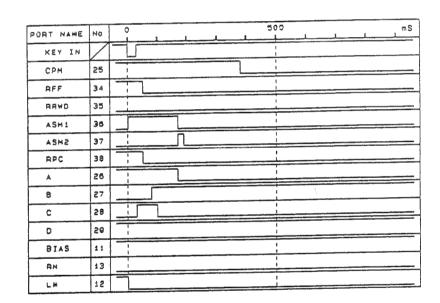
Pin No.	Pin name	1/0	Name	Description						
40	PD6/S6	0	а	Segment drive pin						
41	PD7/S7	0	b	Segment drive pin						
42	PD8/S8	0	С	Segment drive pin						
43	PF1/S9	0	d	Segment drive pin						
44	PF2/S10	0	е	Segment drive pin						
45	PF3/S11	0	f	Segment drive pin						
46	PF4/S12	0	g	Segment drive pin						
47	PF5/S13	0	h	Segment drive pin						
48	PF6/S14	0	i	Segment drive pin						
49	PF7/S15	0	j	Segment drive pin						
50	S16	0	k	Segment drive pin						
51	S17	0	1	Segment drive pin						
52	S18	0	m	Segment drive pin						
53	S19	0	n	Segment drive pin						
54	S20	0	0	Segment drive pin						
55	T15/S21	0	р	Segment drive pin						
56	T14/S22	0	q.r	Segment drive pin						
57	T13/S23	0	s	Segment drive pin						
58	T12/S24	0	t	Segment drive pin						
59	T11/S25	0	U	Segment drive pin						
60	T10/S26	0	V	Segment drive pin						
61	T9/S27	0	w	Segment drive pin						
62	T8/S28	0	×	Segment drive pin						
63	T7	0		Unused pin						
64	T6	0								
65	T5	0	6G	Grid drive pin/Scanning for key reading						
66	T4	0	5G	Grid drive pin/Scanning for key reading						
67	T3	0	4G	Grid drive pin/Scanning for key reading						
68	T2	0	3G	Grid drive pin/Scanning for key reading						
69	T1	0	2G	Grid drive pin/Scanning for key reading						
70	TO	0	1G	Grid drive pin/Scanning for key reading						
71	VFDP			Pulldown power supply for fluorescent display tube drive pin labou	it –30 V)					
72	Voo			Power supply pin +	·5V					
73	NC/VPP			NC						
74	PG0	0	MOTORVOL UP							
75	PG1	0	MOTORVOL DOWN							
76	PG2	0	EJECT	Eject motor drive pin						
77	PG3	ı	SINCRO MODE	Synchronizing mode setting pin	: XR : XS					
78	PE8/INTO	ı	CE	Backup detection pin H: normal L: Backup						
79	PE1/INT1	1	QUICK REVERSE	Quick-reverse detection pin						
80	PE2/INT2	ı	PHOTO nj S.	Photosensor supply side						

TIMING CHART

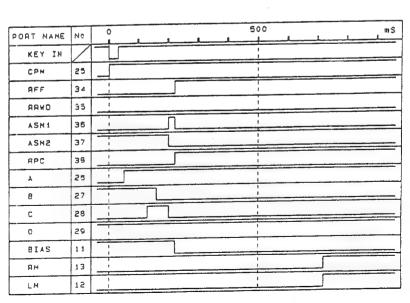
STOP TO PLAY

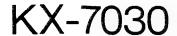
PORT NAME	NO			1_	 	 	500		 	1
KEY IN							1		 	
СРН	25	_					i		 	
AFF	34	_	1						 	
AAMO	35	_	1			 	<u> </u>		 	
ASH1	35					 	i	·		
SHZA	37	_				 	1		 	
яРС	38	_					1			
A	25						l I			
В	27		1				-		 	_===
С	28	_				 	-			
0	29		1				1		 	
BIAS	11		l F				1		 	
AM	13		i i			 	í			
LM	12		1			 	1			

PLAY TO STOP

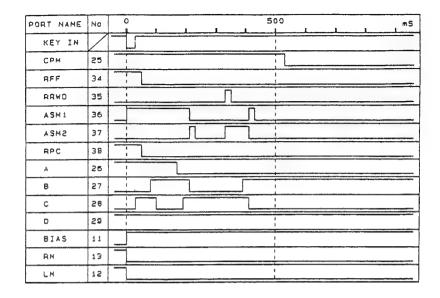


STOP TO REC

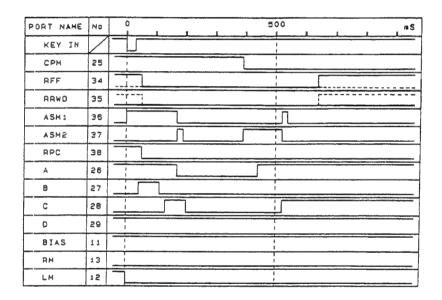




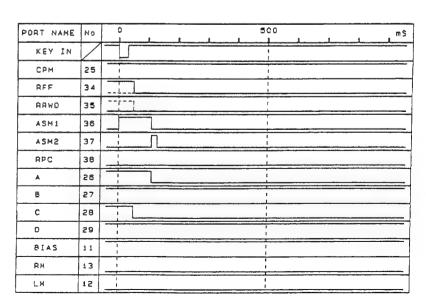
REC TO STOP



PLAY TO CUE/RVW (---)



CUE/RVW TO STOP



STOP TO FF/RWD (---)

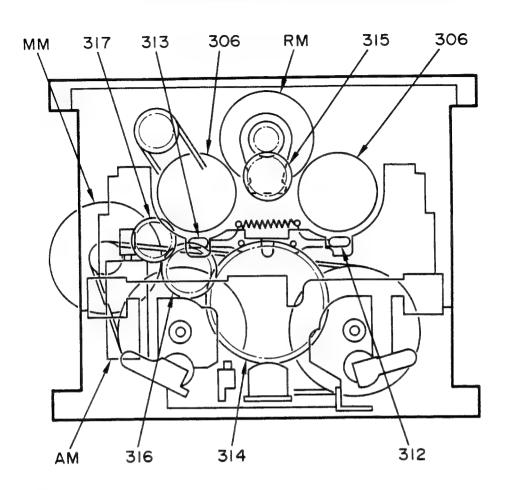
PORT NAME	No	0 500 mS
KEY IN		
СРМ	25	
RFF	34	
RRWD	3'5	
ASH1	36	
SHZA	37	1
APC	38	
А	26	
В	27	
С	88	
D	29	1
BIAS	11	1 1
RH	13	
LM	12	

FF/RWD TO STOP

PORT NAME	No	0	1	 1	 500	1	1	สร
KEY IN				 	1			
СРМ	25				 -			
RFF	34				1			
ARMD	35	1						
ASH1	38							
ASM2	37				-			
RPC	38				1			
A	26			 				
В	27				1			
С	28				!			
D	29	-			i E			
BIAS	11	1			1			
RH	13				 i t			
LH	12				i I			

KX-7030

MECHANISM DESCRIPTION



Mechanism specification

Use of parts

MM T42-0560-08 DC MOTOR ASSY (CAPSTAN)

RM T42-0592-08 DC MOTOR ASSY AM T42-0593-08 DC MOTOR ASSY

BM D16-0299-08 MAIN BELT

BR D16-0325-08 BELT

PLAY Torque: 35 ~55 g·cm FF/RWD Torque: 70 ~160 g·cm Back Tension Torque: 2 ~5 g·cm

MECHANISM DESCRIPTION

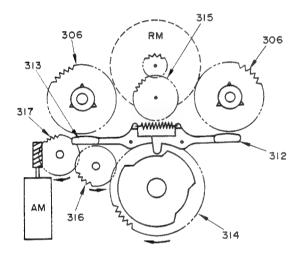
Description of Operation

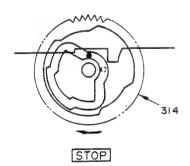
Playback/Record

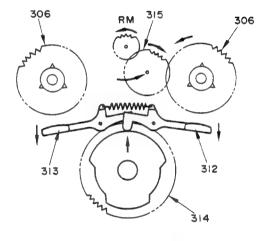
- 1. The assist motor runs.
- 2. Relay gears A and B turn the cam gear in the direction of the arrow, raising the boss on the head chassis. The pinch roller is pressed against the capstan.
- 3. In the PLAY position, the reel brake is released by the cam on the cam gear.
- 4. The reel motor runs in the direction of the arrow, and the idler gear starts turning the takeup reel in the direction of the arrow to start playback/recording.

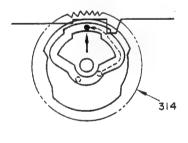
Playback/record → STOP

The assist motor runs, and the operations up to play-back/record are reversed.







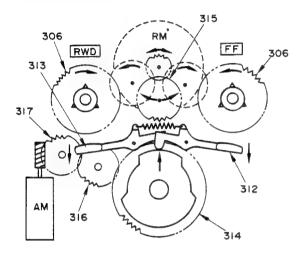


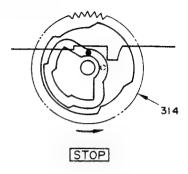
PLAY/REC

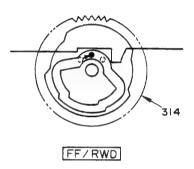
MECHANISM DESCRIPTION

Fast forward/rewind

- The assist motor rotates the cam gear, and the brake assembly is disengaged from the takeup and supply reels.
 The head chassis is not lifted, and the pinch roller and head do not contact the tape.
- 2. The reel motor starts running in the fast forward or rewind directions to wind the tape forward or in reverse.

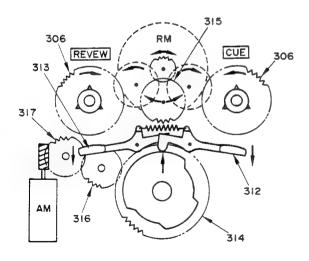


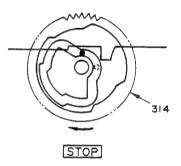


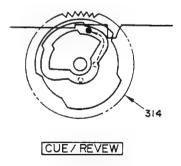


Cue/revew

- The assist motor runs, the cam gear turns, and the head chassis is raised. The pinch roller is also raised, but is not pressed against the capstan. The head contacts the tape.
- The reel motor runs in the cue and revew directions. When the motor runs in the cue direction, the takeup reel is turned by the idler gear; when the motor runs in the revew direction, the supply reel turns to wind the tape.



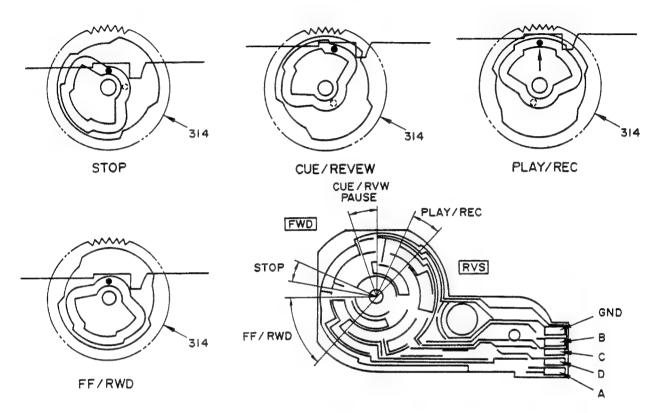




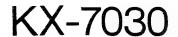
MECHANISM DESCRIPTION

Rotary switch operation

The operation of the mechanism is determined by the position of the rotary switch on the cam gear. Data on rotary switches A to D is input to the micropocessor to control the assist motor, turn the cam gear, and control the head position and the brake assembly.



Direction				RVS (unused	d)						FWD			
Mode	PLAY		PAUSE CUE REV		STOP		FF/RWD	FF/RWD		STOP		PAUSE CUE REV		PLAY
Cam angle	20°	24°	18°	46°	14.5°	11°	46.5°	46.3°	11°	14.5°	46°	18°	24°	20°
A	H			<u>,, </u>				(L)		(L)		Œ		Θ
Rotary B	н				Name of the last o	-		(L)	-	θ		Ð		(L)
switch C	٦							H	T	(L)		(H)		0
D	H							H		$oldsymbol{\Theta}$		Œ		Ð
PLA	Υ													
Head base PAUS position	SE											-		
(approxi- mate) STC	P P													



ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	CASSETTE TAPE DECK SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG
TAPE:	s otherwise specifie NORMAL, DOLBY, sette mechanism se	: OFF, INPUT: LIN	Ε			0 dBs = 0.7	775 V
[1]	Demagnetization and cleaning	_		Power OFF, demagnetization, cleaning play	REC/PB head, erase head, capstan, pinch roller	Demagnetize the REC/PB head by head eraser. Clean the REC/PB head, erase head, capstan and pinch roller with a cotton swab immersed in alcohol.	
[2]	REC/PB head azimuth	MTT-114, TCC-153 10 kHz, —10 dB SCC-1727	(B)	PLAY	Azimuth adjustment screw	In a setting where the output is maximized, adjust the azimuth adjustment screw so that the Lissajous figure appearing on the oscilloscope screen comes near to a line slanted 45°. Note: The head should be installed in such a manner that it approaches the tape face.	(а
[3]	Tape speed	MTT-111 TCC-100 SCC-1727 3 kHz, -4 dB	(B)	** PLAY	Semi-fixed resistor in DC motor assembly	Adjust so that frequency is 3 kHz at the center of the tape.	{b
II. PC	board adjustment						
		MTT-150 400 Hz				Adjust so that LINE OUT is -1.2 dBs.	
<1>	Playback level	MTT-256 SCC-1727 315 Hz	(B)	PLAY	VR1 (L) VR2 (R) (X26-126)	Adjust so that LINE OUT is -4.0 dBs.	
		MTT-256U, TCC-160 315 Hz				Adjust so that LINE OUT is 0 dBs.	
<2>	Bias current	(A) 1kHz, -30 dBs 10 kHz, -30 dBs	(B)	Adjust the REC VR (LEVEL, BALANCE) so that the REC monitor output is —24 dBs at 1 kHz, and record and playback 1 kHz and 10 kHz alternately.	VR31(L) VR32(R) (X26-126)	Record 1 kHz and 10 kHz alternately, and adjust each bias current adjustment VR so that the 10 kHz play back level is +0.5 dBs against 1 kHz.	
<3>	FL meter 0 dB	(A) 1 kHz, -10 dBs	_	Adjust the REC VR (LEVEL, BALANCE) so that the REC PAUSE monitor output is -4 dBs at 1 kHz.	VR95(R) (X25-440)	Adjust so that "0 dB" lights.	

Note: On item <1> in "II. PC board adjustment"

Although 3 kinds of tapes are set forth for the playback level adjustment, the use of one tape suffices for adjustment. Here is meant no necessity for the use of all these 3 kinds of tapes. Other than the abovementioned tapes, when a test tape equal in magnetic flux and frequency is available, the adjustment is feasible with this test tape by making the playback output suited to the specified output level of this tape in agreement with the adjustment method.

^{*} For your safety, remove the MECHANISM Assy with FRONT PANEL & PCB when you adjust tape speed.

REGLAGE

N°	ITEM	L'ENTREE	LA SORTIE	A CASSETTE	L'ALIGNEMENT		75 \
ADE.	NORMAL DOLBY:	OFF INPUT: LINE				0 dBs = 0,7	/5 '
[1]	Démagnétisation et nettoyage		-	Alimentation coupée, démagnétisation, nettoyage, lecture	Tête d'enregis- trement/lecture, tête d'efface- ment, cabestan, galet presseur	Démagnétiser la tête d'enregistrement/lecture avec l'effaceur de tête. Nettoyer la tête d'enregistrement/lecture, la tête d'effacement, le cabestan et le galet presseur avec un coton-tige trempé dans de l'alcool.	
[2]	Azimut de la tête d'enregistrement/ lecture	SCC-1727 MTT-114, TCC-153 10 kHz, —10 dB	(B)	PLAY	Vis d'ajustement de l'azimut	Au réglage où la sortie est maximisée, ajuster la vis de réglage de l'azimut pour que la figure de Lissajous sur l'écran de l'oscilloscope soit proche d'une ligne inclinée sur 45°. Remarque: La tête doit être installée de manière à ce qu'elle s'approche de la face de la bande.	(a
[3]	Vitesse de la bande	SCC-1727 MTT-111. TCC-100 3 kHz, -4 dB	(B)	PLAY	Résistance semi-fixe dans l'ensemble du moteur CC.	Ajuster pour que la fréquence soit, 3 kHz au centre de la bande.	(b
II. Aji	ustement de la plaqu	uette de circuits im	primés				
		MTT-150 400 Hz				Ajuster pour que LINE OUT soit —1,2 dBs.	
<1>	Niveau de lecture		(B)	PLAY	VR1 (L) VR2 (R) (X26-126)	Ajuster pour que LINE OUT soit —4,0 dBs.	
		MTT-256U,	re régié comme suit, à moins d'indication contraire. FF, INPUT: LINE la cassette (ajustement de la tête d'enregistrement/lecture) Alimentation coupée, démagnétisation, nettoyage, lecture lecture Alimentation coupée, démagnétisation, nettoyage, lecture lecture Alimentation coupée, démagnétisation, nettoyage, lecture lecture Vis d'ajustement, le cabestan et le galet presseur avec un coton-tige trement/lecture, la tête d'enregistrement/lecture, la tête d'enregistrement/lecture, la tête d'enregistrement/lecture, la tête d'enregistrement/lecture avec l'effaceur de tête Nettoyer la tête d'enregistrement/lecture, la tête d'enregistrement/lecture avec l'effaceur de tête. Nettoyer la tête d'enregistrement/lecture, la tête d'enregistrement/lecture, la tête d'enregistrement/lecture, la tête d'enregistrement/lecture, la tête d'enregistrement de l'ascimut pour une la tête d'enregistrement et la lecture 1 kHz et 10 kHz alternativement et ajuster chaque d'enregistrement et la lecture 1 kHz et 10 kHz alternativement. Démagnétiser la tête d'enregistrement et la lecture d'enregistrement et la lecture 1 kHz et 10 kHz alternativement.				
<2>	Courant de polarisation	(A) 1kHz, -30 dBs 10		BALANCE) pour que la sortie de contrôle REC soit -24 dBs à 1 kHz et l'enregistrement et la lecture 1 kHz et 10 kHz	VR32(R)	alternativement et ajuster chaque VR d'ajustement de courant de polarisation pour que le niveau de lecture 10 kHz soit +0,5 dBs	
<3>	Compteur fluorescent 0 dB		_	BALANCE) pour que la sortie de contrôle REC PAUSE soit -4 dBs		Ajuster pour que "0 dB" s'allume.	
Rem	arque: Sur le paragr	aphe <1> de II.	Ajustemen	de la plaque de circuits imprimés.			
	Ca alua dan bandas	citáge ci-deceus	duand line	hande test de flux magnetique et de	requence egaux	est disponible, i ajustoment est poor	ible

^{*} Pour des raisons de sécurité, déposer le mécanisme avec le panneau avant et le PCB pour régler la vitesse de la bande.



ABGLEICH

NR	GEGENSTAND		AUSGANGS- INSTELLUNG	KASSETTENGERAT- EINSTELLUNG	PUNKTE	ABGLEICHEN FÜR	ABE
TAPE .	NORMAL DOLBY:	en, müssen die ei OFF, INPUT: LINE				0 dBs - 0,7	′75 \
[1]	Entmagnetisie- rung und Reiningung	—		Spannungsversorgung aus, Entmagnetisierung, Reinigung, Wiedergabe	Aufnahme/ Wiedergabe- kopf, Lösch- kopf, Tonwelle, Andruckrolle	Den Aufnahme/Wiedergabekopf mit einem Entmagnetisierer entmagnetisieren. Den Aufnahme/ Wiedergabekopf, den Löschkopf, die Tonwelle und die Andruckrolle mit einem in Alkohol eingetauchten Wattestäbchen reinigen.	
[2]	Aufnahme/ Wiedergabekopf- Azimut	SCC-1727 MTT-114, TCC-153 10 kHz, —10 dB	(B)	PLAY	Azimut- Einstell- schraube	Bei der Einstellung, bei der der Ausgang maximal ist, so einstellen, daß die auf die Azimut- Einstellschraube dem Oszilloskop- Bildschirm erscheinende Lissajousfigur nahe einer um 45° geneigten Linie kommt. Hinweis: Der Tonkopf muß so installiert sein, daß er zum Band weist.	(а
[3]	Bandgesch- windigkeit	SCC-1727 MTT-111, TCC-100 3 kHz, -4 dB	(B)	** PLAY	semi-fester Wiederstand in der Gleich- strommotor- Einheit	So einstellen, daß die Frequenz in der Mitte des Bandes 3 kHz beträgt.	(b
II. Platinen-Einstellung							
		MTT-150 400 Hz				So einstellen, daß LINE OUT -1,2 dBs beträgt.	
<1>	Wiedergabepegel	MTT-256, SCC-1727 315 Hz	(B)	PLAY	VR1 (L) VR2 (R) (X26-126)	So einstellen, daß LINE OUT -4,0 dBs beträgt.	
		MTT-256U, TCC-160 315 Hz		Schalter wie folgt eingestellt sein: dergabekopf-Einstellung) Aufnahme/ Wiedergabekopf-Einstellung) Aufnahme/ Wiedergabekopf Spannungsversorgung aus, Entmagnetisierung, Reinigung, Wiedergabe kopf, Lösch- kopf, Tonwelle, Andruckrolle Azimut- Einstell- schraube Azimut- Einstell- schraube Bei der Einstellung, bei der der Ausgang maximal ist, so einstellen, daß die auf die Audruckrolle Einstell- schraube Bei der Einstellung, bei der der Ausgang maximal ist, so einstellen, daß die auf die Azimut- Einstell- schraube Bei der Einstellung, bei der der Ausgang maximal ist, so einstellen, daß die auf die Azimut- Einstell- schraube Bei der Einstellung bei der der Ausgang maximal ist, so einstellen, daß die auf die Azimut- Einstell- schraube Bei der Einstellung bei der der Ausgang maximal ist, so einstellen, daß die auf die Azimut- Einstellschraube dem Oszilloskop Bildschirm erscheinende Lissajousfigur nahe einer um 45' geneigten Linie kommt. Hinweis: Der Tonkopf muß so installen, der Mitte des Bandes 3 kHz beträgt. VR1 (L) VR2 (R) (X26-126) VR3 (L) VR3 (
<2>	Vormagnetisie- rungsstrom	(A) 1kHz, -30 dBs 10 kHz, -30 dBs	(B)	(LEVEL, BALANCE) so einstellen, daß der REC-Überwachungs- ausgang —24 dBs bei 1 kHz beträgt, und 1 kHz und 10 kHz abwechselnd aufnehmen und	VR32(R)	aufnehmen und jeden Vormagnetisierungsstrom- Einstellungs-Regelwiderstand so einstellen, daß der 10-kHz- Wiedergabepegel +0,5 dB gegen	
<3>	FL-Meter 0 dB	(A) 1 kHz, -10 dBs	_	(LEVEL, BALANCE) so einstellen, daß der REC PAUSE- Überwachungs-Ausgang —4 dBs		So einstellen, daß "0 dB" leuchtet.	

gleichen magnetischen Fluß und gleicher Frequenz verfügbar ist, kann die Einstellung mit diesem Testband durchgeführt werden, indem der Wiedergabe-Ausgang für den spezifizierten Ausgangspegel dieses Bandes in Übereinstimmung mit der Einstellmethode passend gemacht wird. * Zu Ihrer Sicherheit sollten Sie zum Einstellen der Bandgeschwindigkeit die Laufwerk-Baugruppe zusammen mit der

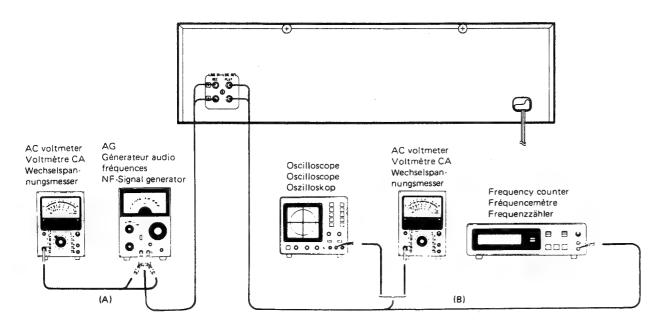
Das bedeutet, daß nicht alle 3 Arten Bänder verwendet werden brauchen. Wenn ein anderes Testband als die oben angeführten Bänder mit

Frontplatte und der Leiterplatte entfernen.

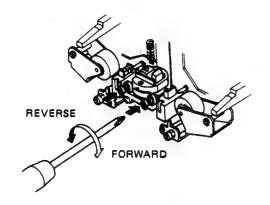
KX-7030 KX-7030

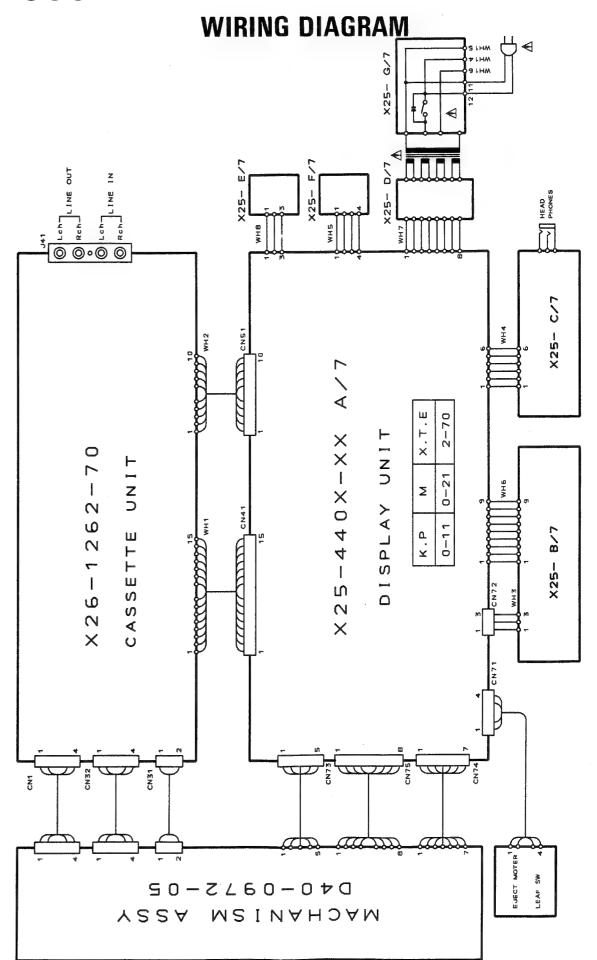
ADJUSTMENT/REGLAGE/ABGLEICH

Measurement Equipment Connections:

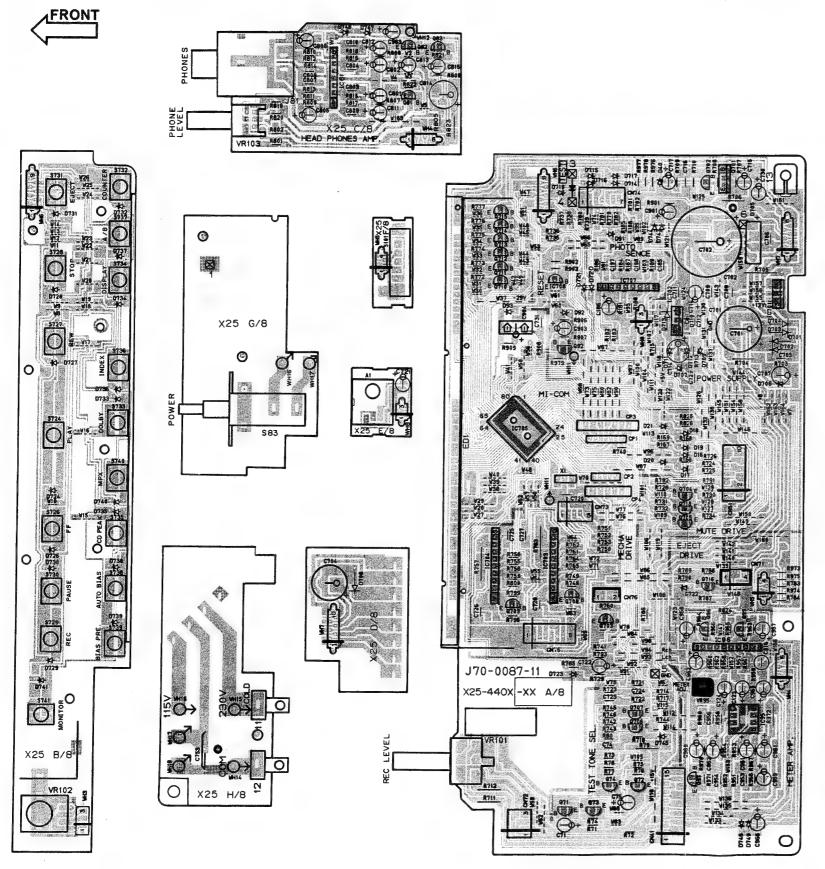


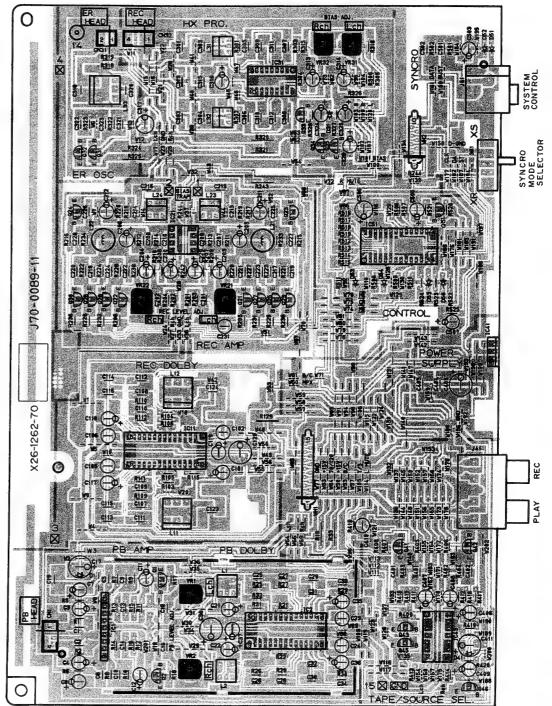
(a) Azimuth adjustment



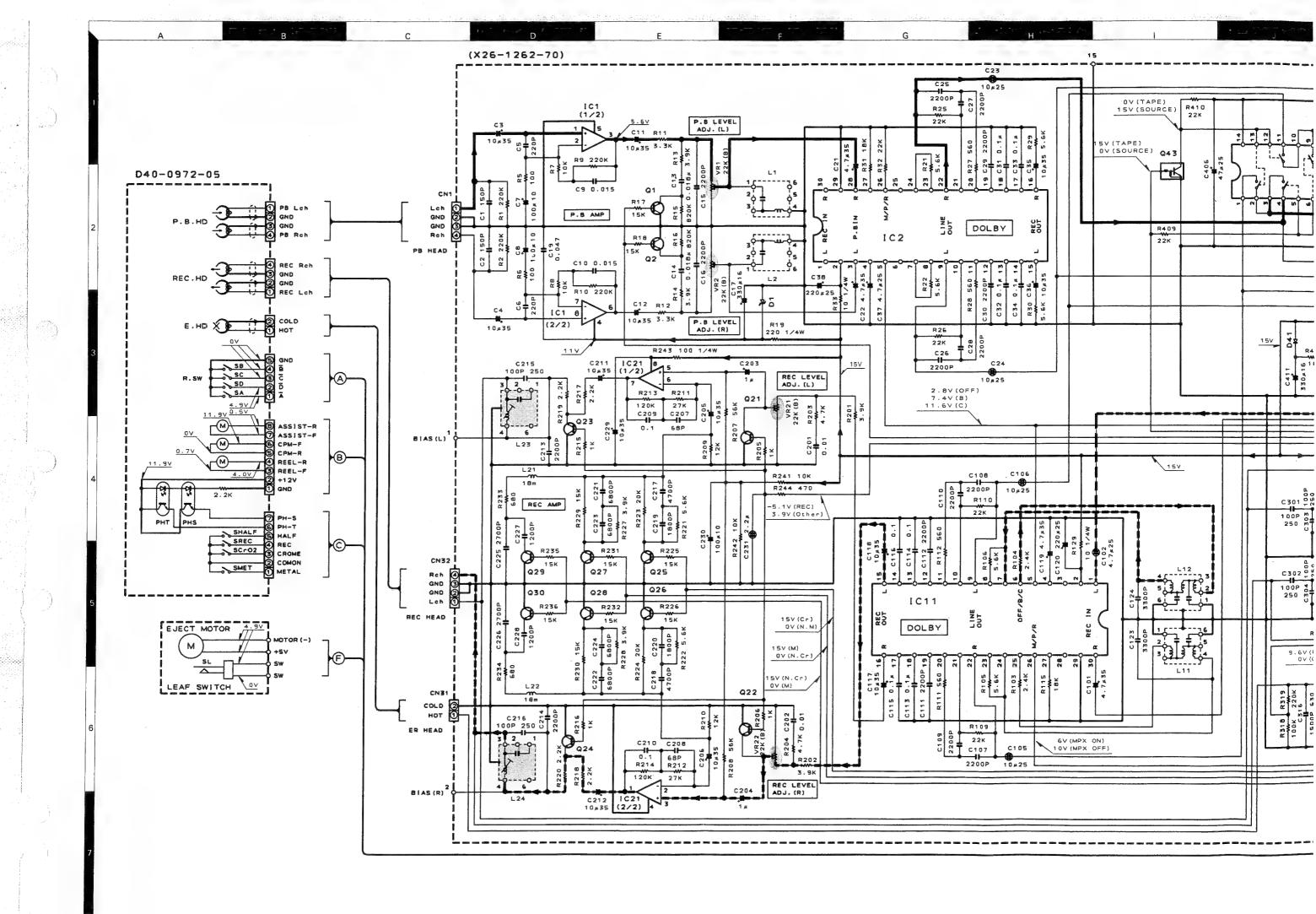


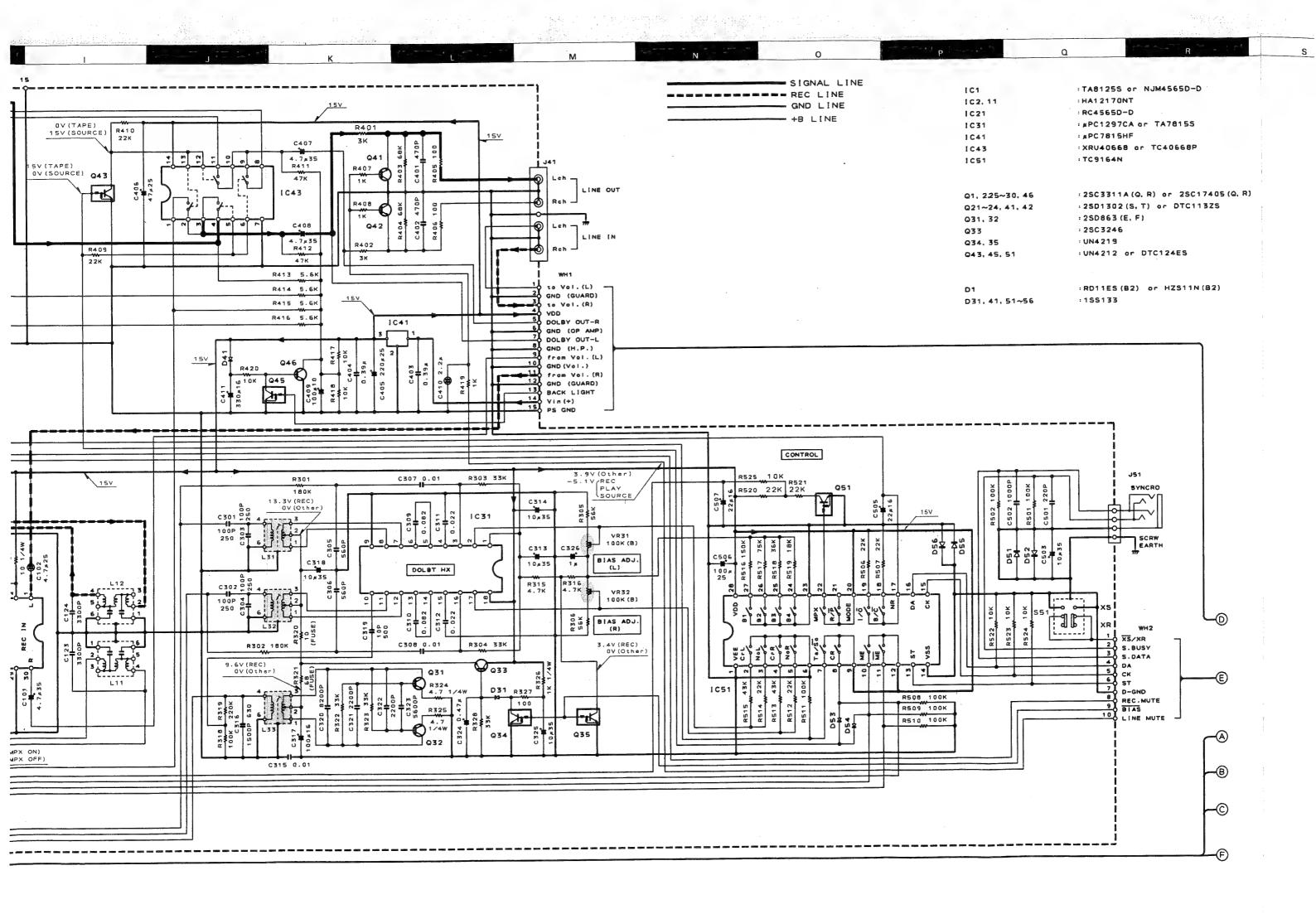
PC BOARD (Component side view)

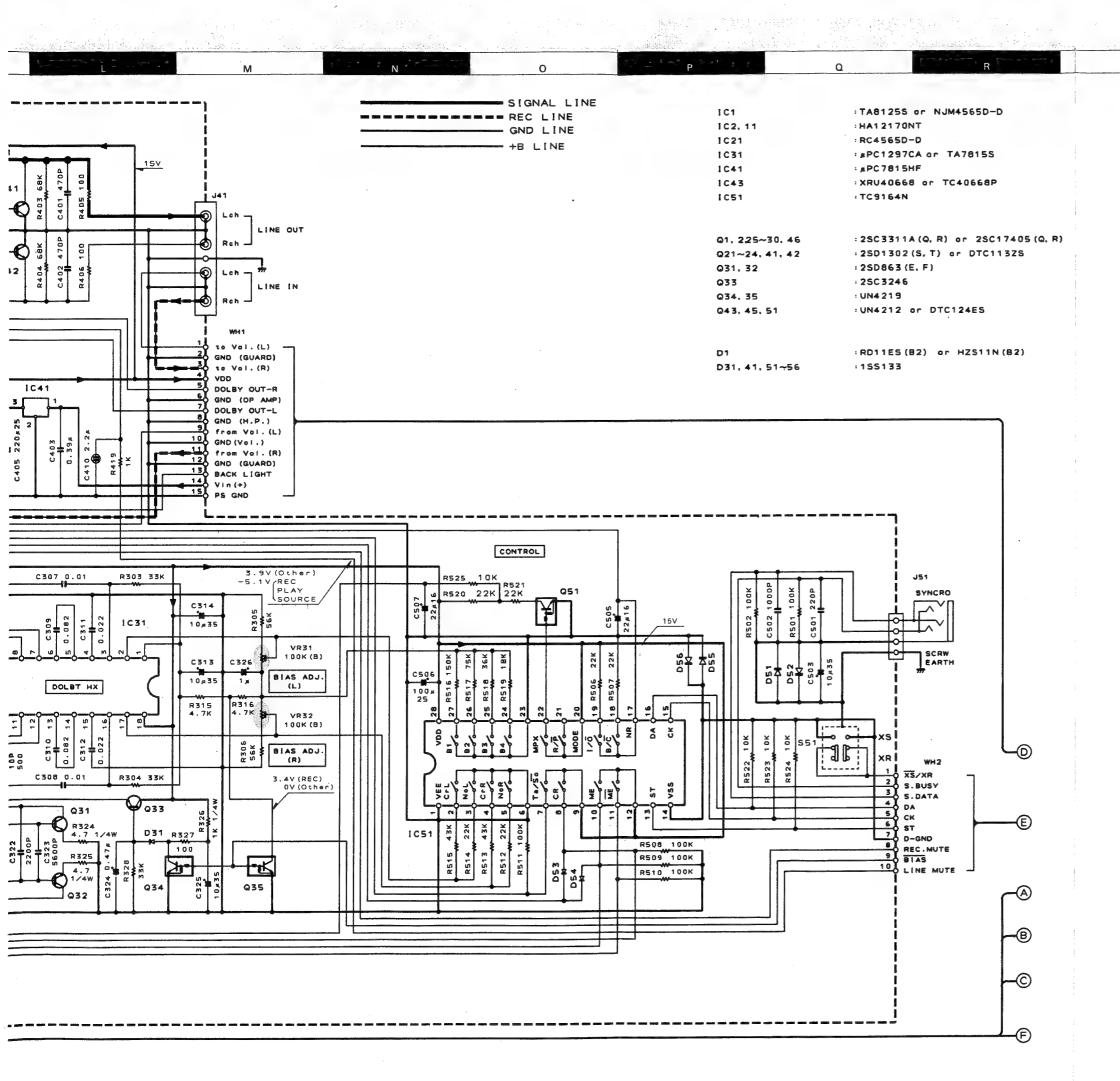




Refer to the schematic diagram for the values of resistors and capacitors







DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in the record mode.

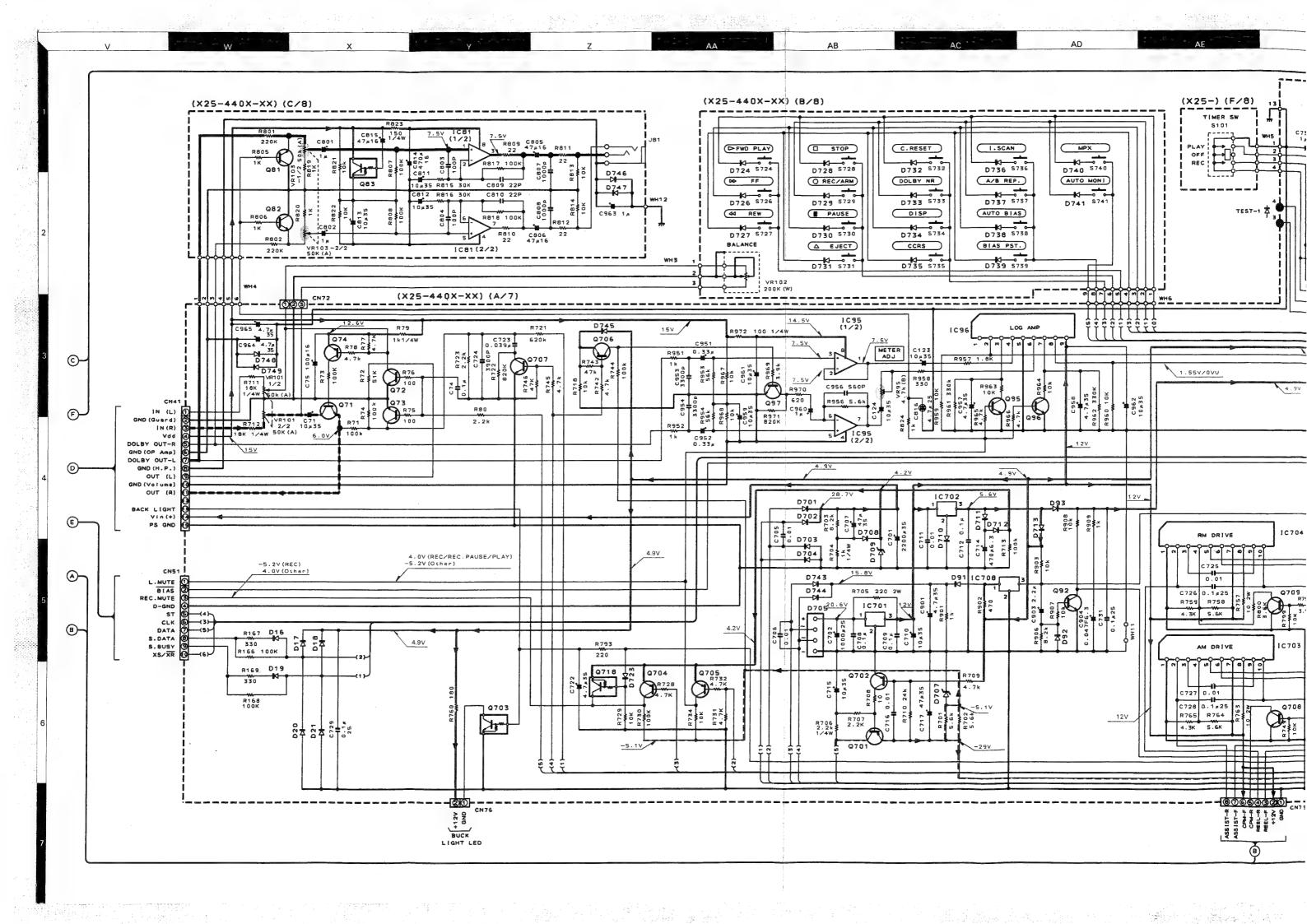
Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance, une cassette étant insérée en mode du lecture. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

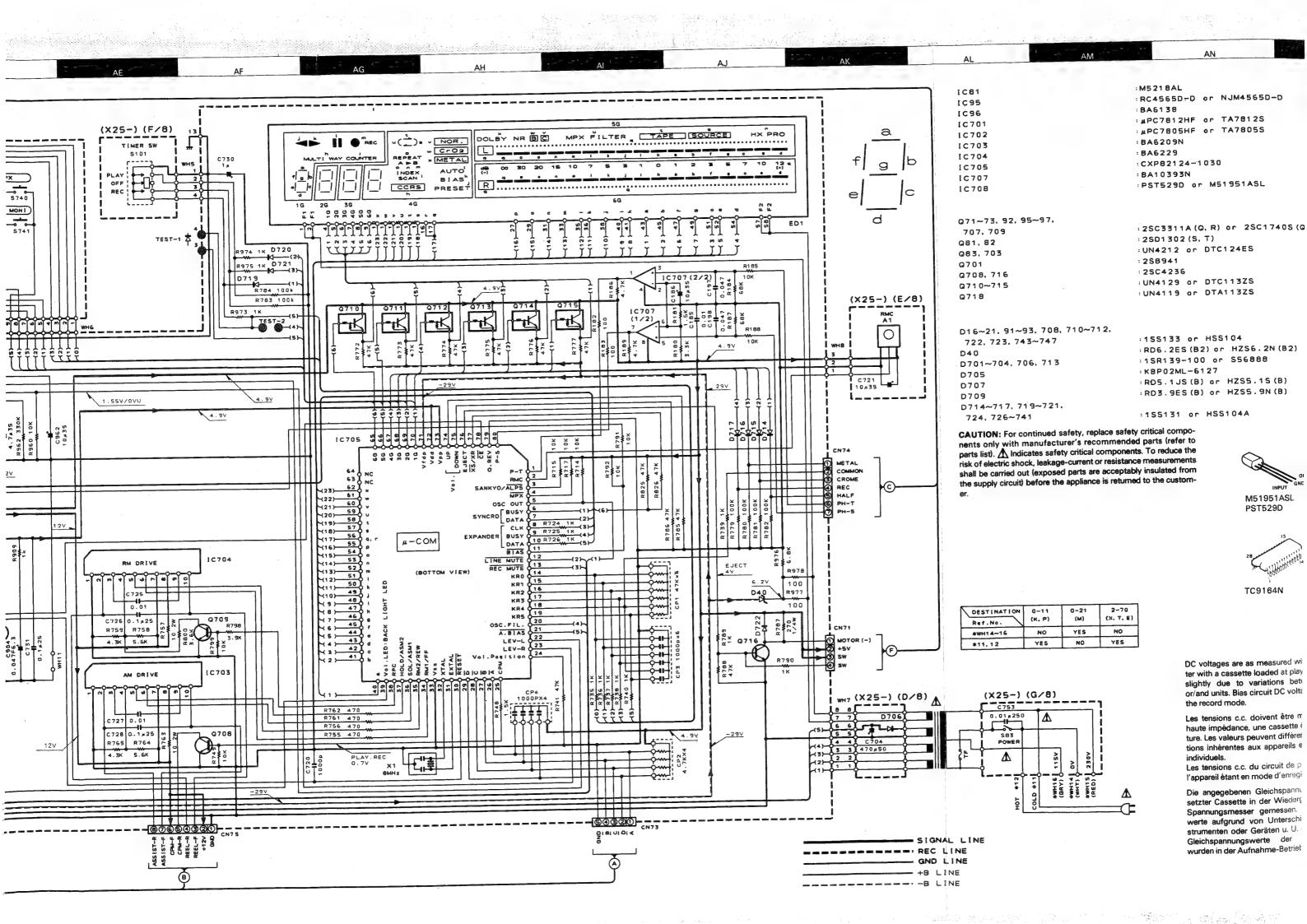
Les tensions c.c. du circuit de polarité doivent être mesurées, l'appareil étant en mode d'enregistrement.

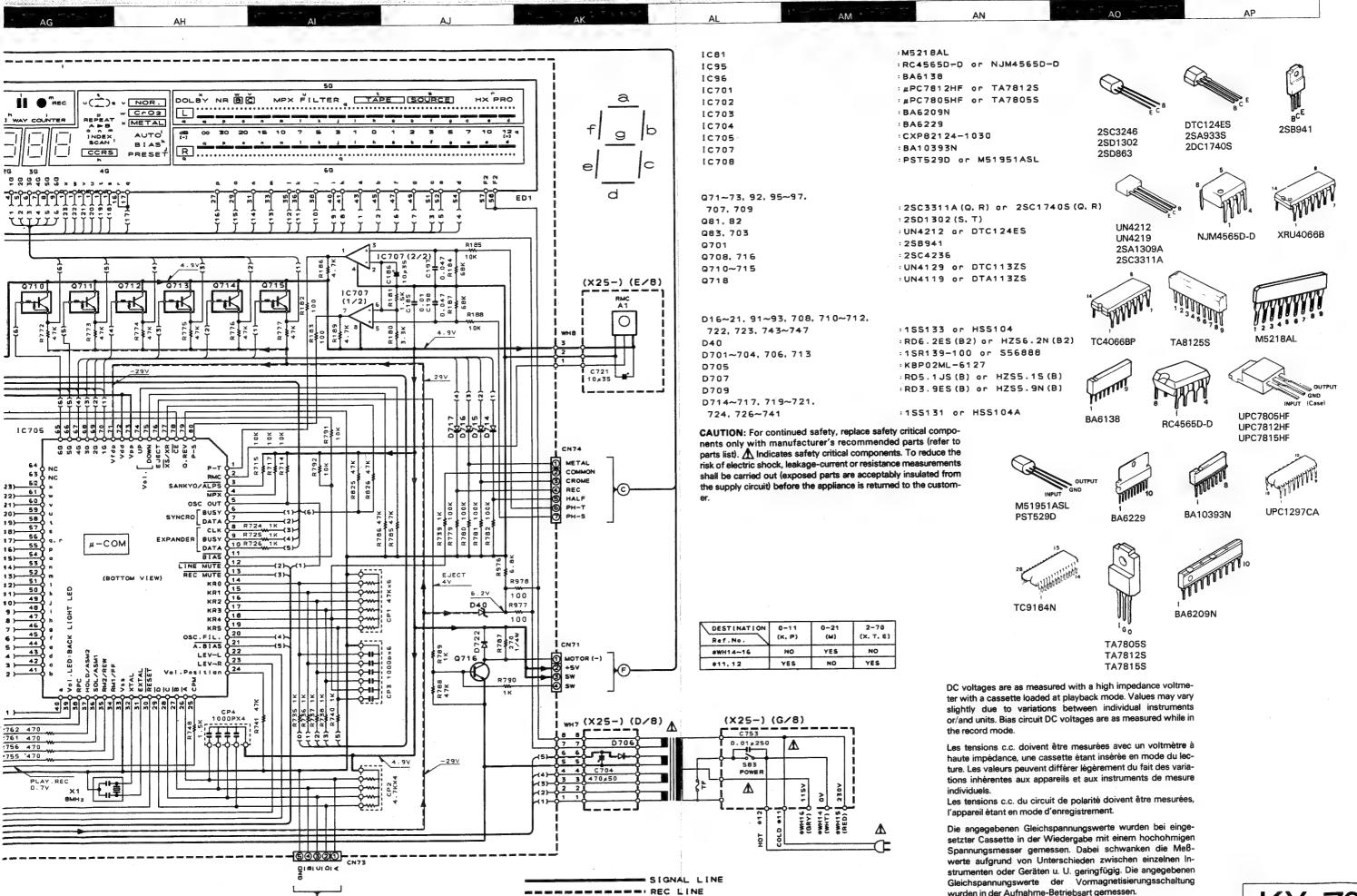
Die angegebenen Gleichspannungswerte wurden bei eingesetzter Cassette in der Wiedergabe mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. Die angegebenen Gleichspannungswerte der Vormagnetisierungsschaltung wurden in der Aufnahrne-Betriebsart gemessen.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). A Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.









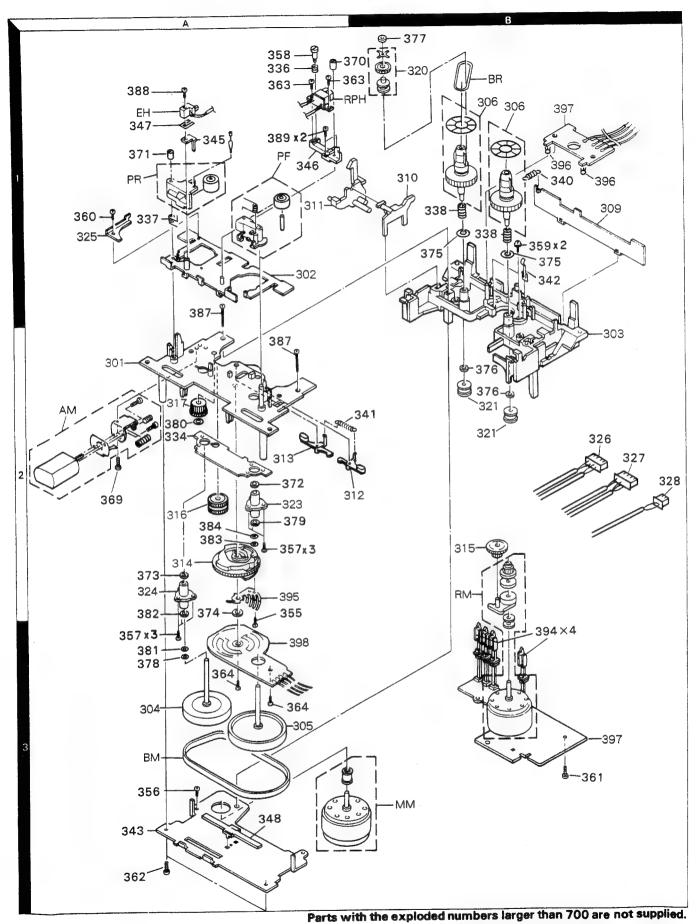
- GND LINE +B LINE

_____B LÎNE

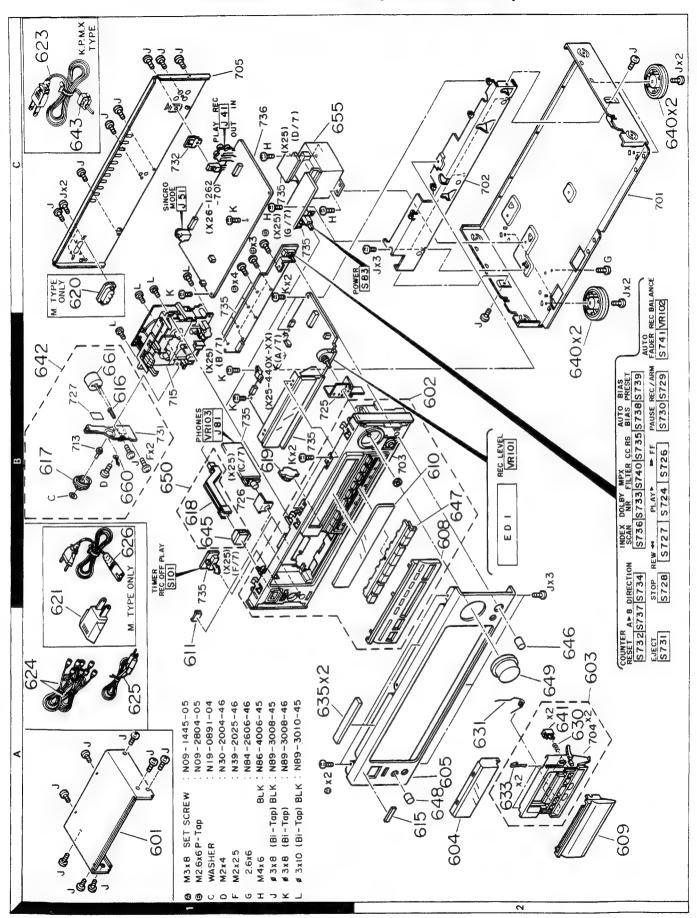
wurden in der Aufnahme-Betriebsart gemessen.

Y26-3270-00

EXPLODED VIEW (MECHANISM)



EXPLODED VIEW (MAIN UNIT)



* New Parts
Parts without Parts No. are not supplied.

ilonnes dans le Parts erden nicht geliefer ress New Parts	it ge	s No. ne sont pas fournis.	لب	Parts No. Description Desti- Re-	海 唯 九/新 祐
erdenr	No. werdenr	dans le Par	icht gelief.		**
	Add	tlonnes	verden r	ress	, <u> </u>

	Destination list
No.1	

Display unit X25-4400-11 KX-7030K, P X25-4400-21 KX-7030M	
---	--

K, P, M, X, T, E JAPAN MADE

KX-7030

n.	
.χ .Χ	
KX-7030K, P. M. X, T.	
X26-1262-70	

Cassette unit

DRESSING PLATE (PANEL)
DRESSING PLATE (CASSETTE)
FROWT CLASS
LEG(SEF-601C)
KENVØØD BADGE

803-2712-03 803-2714-03 810-1848-03 830-1036-05 843-0287-04

20 20

2000 2000

601 602 603 604 605 608 609 610 611

METALLIC CABINET SUB PANEL ASSY CASSETTE HOLDER ASSY CASSETTE LID PANEL

20

Mechanism ass'v

(FRENCH) (FRENCH) (SPA, CHI) (GE, DU, IT)

INSTRUCTION MANUAL (INSTRUCTION MANUAL (INSTRU

860-0416-00 B60-0417-00 B60-0418-00 B60-0419-00

WARRANTY CARD WARRANTY CARD WARRANTY CARD WARRANTY CARD

B46-0092-03 B46-0096-23 B46-0121-03 B46-0122-13 B46-0143-13

WORM GEAR EXTENSION SHAFT DAMPER

D13-0282-04 D13-0918-03 D21-1648-03 D39-0176-05

2222

616 617 618 619

INLET PLUG ADAPTEI POWER CORD POWER CORD POWER CORD

E03-0102-25 E03-0115-05 E30-0459-05 E30-0780-05

01

620 623 623 623

monman mood

2 2	Mechanism ass y	D40-0972-06 KX-7030K, P, M, X, T, E
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KPMX

AC POWER CORD AUDIO CORD CORD WITH PLUG AC POWER CORD (INLET)

E30-1416-05 E30-0505-05 E30-0977-05 E30-1329-05

623 624 625 626

COMPRESSION SPRING TORSION COIL SPRING FLAT SPRING SOFT TAPE

G01-2288-04 G01-3351-04 G02-0937-04 G11-0185-04

630 633 633 635

	4
	A ro
P: Canada	Mr. Othor Arone
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K: USA	T. Frontand
¥	Ė
E: Scandinavia & Europe	Y. PX (Far Fact Hawaii)
avia	Fact
andir	Far
Sci	Ä
نٺ	×

X: Australia Y: AAFES (Europe)

indicates safety critical components

B POWER (K29-4180-04 ASSY)
B REC BALANCE
B TAPE CONTROL
B PHONES LEVEL
B REC LEVEL

K29-3835-04 K29-4010-04 K29-4150-03 K29-4151-04 K29-4153-04

22222

645 646 647 648 649

CLAMPER ASSY MOUNTING HARWARE ASSY (EJECT) POWER CORD BUSHING WIRE BAND

ITEM CARTON CASE
POLYSTYRENE FOAMED FIXTURE
POLYSTYRENE FOAMED FIXTURE
PROTECTION COVER(460X370X36))
PROTECTION SAG (800X400X0.03)

H50-0047-04 H10-5117-12 H10-5118-12 H20-0417-14 H25-0224-04

PROTECTION BAG (235X350X0.03)

H25-0232-04

FOOT

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640 641 643 643

302-1052-05 311-0140-04 321-5710-15 342-0083-05 361-0307-05

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ELECTRO ELECTRO ELECTRO CERANIC

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C71 C74 C75 C123,124 C185

10 | 142-0567-05 | DC H0T0R (EJECT) | DISPLAY UNIT (X25-4400-11: K, P. 0-21: M, 2-70:X, T, E)

LEAF SHITCH SET SCREW

PAN HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW

N84-2606-46 N86-4006-45 N89-3008-45 N89-3008-45 N89-3010-45

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N09-2776-05 574-0001-05

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SET SCREW (M3X8)
TAPPING SCREW (2.6X6)
FLAT WASHEN
PAN HEAD MACHIN SCREW
PAN HEAD MACHIN SCREW

NO9-1445-05 NO9-2804-05 N19-0891-04 N30-2004-46 N39-2025-46

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T: England M: Other Areas P: Canada

X: Australia

A indicates safety critical components.

MXTE KP

CERANIC FILM FILM ELECTR®

C91-0700-05 C91-1421-05 C91-1439-05 CE04KWIH010M

AMSE

0.010UF 10UF 4.7UF 0.039UF 3900PF

CERANIC ELECTRO ELECTRO MF

CK45FFHH03Z CE04KH1V100M CE04KH1V4R7M CF92FV1H393J CF92FV1H392J

0.010UF 0.10F 0.010UF 0.1UF 1.0UF

CERANIC CERANIC CERANIC CERANIC ELECTRO

CK45FF1H103Z C91-0700-05 CK45FF1H103Z C91-0700-05 CE04KW1H010M

C725 C726 C727 C727 C728,729

0.10UF 470UF 10UF 0.010UF 47UF

MF ELECTRO ELECTRO CERAMIC ELECTRO

CF92FV1H104J CE04KW0J471M CE04KW1V100M CK45FF1H103Z CE04KW1V470M

C712 C714 C715 C715 C717

1547

10UF 0.047UF 2200UF 10000UF 470UF

ELECTRO CERAMIC ELECTRO ELECTRO

CE04KWIV100M CK45FFIH473Z CE04KWIV222M C90-1872-05 CE04KWIH471M

C196 C197, 198 C701 C702

0.010UF 47UF 0.10UF 10UF 0.010UF

CERANIC ELECTRO MF ELECTRO

CK45F1H103Z CE04KW1V470M CF92FV1H104J CE04KW1V100M CF92FV1H103J

C705,706 C707 C708,709 C710 C711

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T: England M: Other Areas X: Australia

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No.5

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No.4

Desti- Re-nation marks 在向备数

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DIODE

1SR139-100 HZS5.1S(B) RD5.1JS(B) HSS104 1SS133

DIODE

ZENER ZENER DIODE DIODE DIODE

HZS3.9N(B) RD3.9ES(B) HSS104 1SS133 S5688B

0709 0710-712 0710-712 0713

D100E D100E D100E D100E

1SR139-100 HSS104A 1SS131 HSS104A 1SS131

0713 0714-717 0714-717 0719-721 0719-721

Description

Parts No.

幸 唱 禁

Address New Parts

中華服券 Ref. No.

Les articles non mentionnes dans le Parts No. ne sont pas fournis.

Telle ohne Parts No. werden nicht geliefert. Parts without Parts No. are not supplied.

CGGAKNIVION C13 112 CGGAKNIVION C13 114 CGGAKNIVION C13 114 CGGAKNIVION C13 114 CGGAKNIVION C13 114 CGGAKNIVION C13 122 CGGAKNIVION C23 24 CGGAKNIVION C23 24 CGGAKNIVION C25 36 CGGAKNIVION C37 CGGAKNIVION C10 CGGAKNIVION CCGGAKNIVION C	21H ELECTRO ELECTRO 05 NP-ELEC 05 NP-ELEC 05 NP-ELEC 05 NP-ELEC 05 NP-ELEC 04 HF ELECTRO 05 ELECTRO 05 ELECTRO 05 ELECTRO 05 NF ELECTRO 05 NF NF 05 NF	4.70F 100F 2200PF 0.100F 100F 4.70F 4.70F 4.70F 100F 100F 100F 100F 100F 100F 100F 1
207, 208 CC455 LING 209, 210 CC672 FV1H11 213, 214 & C095 FS1H22 213, 214 & C095 FS1H22 215, 216 & C91-1432-(215, 216 & CF92 FV1H32-(215, 216 & CF92 FV1 H32-(215, 216 & CF	23 POLY POLY POLY FILM	, .0.401
221,222 CF92EV1H18 223,224 CF92EV1H08 223,224 CF92EV1H08	22333	1800PF 0.010UF 6800PF 2700PF 1000PF

IC(OP AMP X2)
IC(OP AMP X2)
IC(ROOT AMP X2)
IC(ROOT AMP X2)
IC(VOLTAGE REGULATOR/ +12V)
IC(VOLTAGE REGULATOR/ +12V)

NJM4565D-D RC4565D-D BA6138 TA7812S UPC7812HF

+50)

ICCVOLTAGE REGULATOR/ +5
ICCVOLTAGE REGULATOR/ +5
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TA78055 UPC7805HF BA6209N BA6229 CXP82124-1049

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ICCSYSTEM RESET)
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TRANSISTOR

BA10393N #51951ASL PST529D 2SC1740S(Q,R). 2SC3311A(Q,R)

IC707 IC708 IC708 Q71 -73

TRANSISTOR TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR

2SA1309A(Q,R) 2SA933S(Q,R) 2SD1302(S,T) 0TC124ES UNA212

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2SC1740S(Q,R) 2SC3311A(Q,R) 2SC1740S(Q,R) 2SC3311A(Q,R) 2SB941

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092 095 095 0701

DIODE DIODE DIODE FLUGRESCENT INDICATOR TUBE IC(OP AMP X2)

155131 HSS104 155133 FIP17AW6Y HS218AL

D726-741 D743-749 D743-749 ED1 IC81

HSS104 1SS133 HSS104A 1SS131 HSS104A

0722,723 0722,723 0724 0724 0726-741

T: England M: Other Areas K: USA E: Scandinavia & Europe Y: PX (Far East, Hawaii) Y: AAFES (Europe)

A indicates safety critical components.

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TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR

25A1309A(Q,R) 25A933S(Q,R) DTC124ES UNA212 25A1309A(Q,R)

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	*	UPC7815HF TC4066BP XRU4066B TC9164N 2SC1740S(4,R)	IC(VOLTAGE REGULATOR/ +15V) IC(ANALGG/ DIGITAL SW) ICCANALGG SWITCH)L SW) IC(16CH BILATERAL SELECTOR SW) TRANSISTOR		
		2SC3311A(Q,R) 2SD1302(S,T) 2SC1740S(Q,R) 2SC3311A(Q,R) 2SD863(E,F)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
	**	2SC3246 DTC113ZS UN4219 2SD1302(S,T) DTC124ES	TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR		
		UN4212 DTC124ES UN4212 2SC1740S(Q,R) 2SC3311A(Q,R)	TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR		
		DTC124ES UN4212	DIGITAL TRANSISTOR TRANSISTOR		
	***	- 1	IS CALKED AS IS CALKED AS IS CALKED AS HASSIS ASSY EEL		
	* *	-0293-08 -2429-08 -2430-08 -2431-08	REEL DISK ASSY CASSETTE LEVER LEVER EJECT LEVER BRAKE LEVER (L)		
	* **	010-3199-08 013-0874-08 013-0875-08 013-0953-08 013-0954-08	BLAKE LEVER (R) CAM GEAR IDLER GEAR GEAR ASSY GEAR ASSY		
		015-0308-08	PULLEY ASSY		

E: Scandinavia & Europe	K: USA	P: Canada
Y: PX (Far East, Hawaii)	T: England	M: Other Areas
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C229 C230 C231 C301-304 C305, 306		**	CEO4KW1V100M CEO4KW1A101M C90-1350-05 C91-1432-05 CK45FB1H561K	ELECTRO ELECTRO NP-ELEC FILM CERAMIC	100F 100UF 2.2UF 100PF 560PF	35WV 10WV 50WV J		
C307,308 C309,310 C311,312 C313,314			CF92FV1H103J CF92FV1H823J CF92FV1H223J CG04KV1V100H CK4SFF1H103Z	MF NF NF ELECTRO CERANIC	0.010UF 0.082UF 0.022UF 10UF 0.010UF	3 3 3 3 4 7		
C316 C317 C318 C319			C91-0775-05 CEO4KNIC101M CEO4KNIV100M CC45FSL2H100D CF92FVIH822J	POLYPRO ELECTRO CERAMIC	1500PF 100UF 10UF 10PF 8200PF	J 16WV 35WV J		
C321, 322 C323 C324 C325 C326			CF92FV1H223 CF92FV1H5623 CEO4KV1HR47H CGO4KV1V100H CEO4KV1V100H	MF MF ELECTRO ELECTRO ELECTRO	2200PF 5600PF 0.47UF 10UF 1.0UF	J 35WV 35WV 50WV		
C401,402 C403,404 C405 C406 C406			CK45FB1H471K CF92FV1H394J CEO4KN1E221H C90-1922-O5 CEO4KN1V4R7M	CERAMIC MF ELECTRO ELECTRO	470PF 0.39UF 220UF 47UF 4.7UF	K J 25WV 35WV		
C409 C410 C411 C501			CEO4KW1A101M C90-1350-05 CEO4KW1C331H CC45FSL1H221J CK45FB1H102K	ELECTRO NP-ELEC ELECTRO CERAMIC CERAMIC	1000F 2.20F 3300F 220PF 10000PF	104V 504V J K		
C503 C505 C506			CEO4KW1V100M CEO4KW1C220M CEO4KW1E101M CEO4KW1C220M	ELECTRO ELECTRO ELECTRO	100F 22UF 100UF 22UF	35WV 16WV 25WV 16WV		
J41 J51			E13-0445-05 E11-0180-05	PHONG JACK (HONE JACK	NE IN/OUT SYNCRO		
L1 ,2 L11 ,12 L21 ,22 L23 ,24 L31 ,32			L39-0190-05 L79-0792-05 L40-1835-29 L39-0190-05 L32-0393-05	TRAP COIL LC FILTER SMALL FIXED INDU TRAP COIL BIAS ØSCILATING	INDUCTOR(1)	(f, HM81		***
L33			L32-0386-05	SCILATING COIL	П			
R19 R33 R129 R243 R320			RD14NB2E221J RD14NB2E100J RD14CB2E100J RD14NB2E101J R92-0219-05	RD FL-PROOF RD RD FUSE RESIST	220 10 10 100 10	J 1/4W J 1/4W J 1/4W G 1/4W		
R321 R326 VR1,2 VR21,22 VR31,32		*	R92-0226-05 R014GB2E102J R12-3666-05 R12-3145-05 R12-5651-05	FUSE RESIST FL-PROGE RD TRIMMING POT. TRIMMING POT. TRIMMING POT.	68 1.0K (22K) (22K) (100K)	G 1/4W J 1/4W		
551			531-2094-05	SLIDE SWITCH	SYNCDA	100		

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X: Australia E: Scandinavia & Europe K: USA
Y: PX (Far East, Hawaii) T: England
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	Description	野哥名/熊翁	MAIN BELT BELT ERASE HEAD OC HOTOR ASSY (CAPSTAN) PINCH ROLLER ASSY	PINCH ROLLER ASSY DC MOTOR ASSY RECORD/PLAYBACK HEAD	
nt gellefert.	Parts No.	安林市 原	D16-0299-08 D16-0325-08 T32-0309-05 T42-0560-08	D14-0339-08 T42-0592-08 T34-0340-05	
nct	1	Per ts	*	***	
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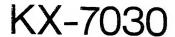
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	*	0321 0263 0264	PULLEY ASSY CAPSTAN RETAINER ASSY CAPSTAN RETAINER ASSY	
	*	32-0191-0 35-0202-0	TOPPER IRING HARNESS (4P	
	**	E35-0203-08 E35-0204-08 F39-0053-08 G01-2466-08	WIRING HARNESS (4P REC HEAD) WIRING HARNESS (2P ERSE HEAD) RELIVENCINC PARTS COMPRESSION SPRING TORSION SPRING	
28	***	G01-3413-08 G01-3416-08 G01-3423-08 G02-0959-08 J21-5598-08	COMPRESSION SPRING BLUE TORSION SPRING FORSION SPRING (BRAKE) FLAT SPRING (CASSETTE) WOUNTING HARDWARE (MOTOR)	
	*	J21-5600-08 J21-5773-08 J30-0274-08 J39-0158-08 N09-2757-08	MOUNTING HARDWARE (ERASE HEAD) NOUNTING HARDWARE SPACER (ERASE HEAD) SCREW MXX3	
		N09-2758-08 N09-2759-08	SCREV N2.6X3 SCREV N2X6	
		9-2762-	222	
	***	N09-2764-08 N09-2765-08 N09-2851-08 N09-2852-08 N09-2857-08	SCREW M2.6X8 SCREW M2.6X8 SCREW M2X4 SCREW M2X3 SCREW	
		N14-0189-08 N14-0190-08 N19-1235-08 N19-1236-08 N19-1237-08	NUT NUT FLAT WASHER /2.5X7X0.8 FLAT WASHER /2.2X7X0.8 FLAT WASHER /3X6X0.5	
	* *	N19-1239-08 N19-1240-08 N19-1241-08 N19-1275-08 N19-1276-08	FLAT WASHER FLAT WASHER FLAT WASHER FLAT WASHER FLAT WASHER FLAT WASHER 72.6X7X0.13	
	****	N19-1277-08 N19-1278-08 N19-1279-08 N19-1280-08 N19-1281-08	FLAT WASHER FLAT WASHER FLAT WASHER FLAT WASHER	
	**	N30-2630-46 N35-2012-46 N73-2004-46 S74-0005-08 S90-0112-08	PAN HEAD NACHINE SCREW M2.6X30 BINDING HEAD MACHINE SCREW SCREW M2X4 BUICH WAFERS	
	***	T95-0118-08 W02-1112-08 W02-1113-08 J61-0094-08 T42-0593-08	PHOTO ISOLATOR ELECTRIC UNIT ELECTRIC UNIT VIRE BAND DC NOTOR ASSY	

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E: Scandinavia & Europe K: USA P: Canada Y: PX (Far East, Hawaii) T: England M: Other Areas Y: AAFES (Europe) X: Australia



SPECIFICATIONS

Track System 4-track, 2-channel stereo Recording System AC bias (Frequency: 210 kHz) Heads Playback/recording head (Combination head) 1 Erasing head 1 Motors..... DC motor×3 Fast Winding Time Approx. 80 seconds (C-60 tape) Frequency Response: Normal Tape 20 Hz to 18,000 Hz, ± 3 dB CrO_2 Tape 20 Hz to 19,000 Hz, ± 3 dB Metal Tape 20 Hz to 20,000 Hz, ±3 dB Signal-to Noise Ratio: Dolby C NR ON...... 75 dB (Metal tape) Dolby B NR ON 67 dB (Metal tape) Dolby NR OFF...... 59 dB (Metal tape) Harmonic Distortion...... Less than 0.7% (at 1 kHz, 3rd H.D.Metal Tape)

Wow and Flutter...... 0.045% (W.R.M.S.) ±0.10% (DIN) Input sensitivity/Impedance: LINE IN 77.5 mV/50 k Ω Output Level/Impedance: LINE OUT 490 mV/3 k Ω Headphones...... 0.85 mW/8 Ω [GENERAL] Power Consumption 24 W Dimensions..... W: 440 mm (17-5/16") H: 127 mm (5") D: 324 mm (12-3/4") Weight (Net)..... 5.1 kg (11.2 lb)

KENWOOD follows a policy of continuous advancements in development For this reason specifications may be changed without notice. DOLBY and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation. Noise reduction circuit made under license from Dolby Laboratories Licensing Corporation.

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KENWOOD strebt ständige Verbesserungen in der Entwicklung an Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten. DOLBY und Doppei-D-Symbol sind eingetragene Warenzeichen der Dolby Laboratories.
Dolby-Rauschunterdrückung mit Lizenz der Dolby Laboratories gefertigt.

Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

KENWOOD CORPORATION Shibuya Building. 17-5. 2-chome Shibuya. Shibuya-ku. Tokyo 150. Japan

KENWOOD U.S.A. CORPORATION 2201 East Dominguez Street, Long Beach, CA 90810, 550 Clark Drive, Mount Olive, NJ 07828, U.S.A. KENWOOD ELECTRONICS CANADA INC.

PO BOX 1075, 959 Gana Court, Mississauga, Ontario, Canada L4T 4C2 TRIO-KENWOOD UK LIMITED

KENWOOD House, Dwight Road, Watford, Herts., WD1 8EB United Kingdom

KENWOOD ELECTRONICS BENELUX NV Mechelsesteenweg 418 B-1930 Zaventern, Beigium

KENWOOD ELECTRONICS DEUTSCHLAND GMBH

Rembrucker-Str 15, 6056 Heusenstamm.

TRIO-KENWOOD FRANCE S.A.

13 Boulevard Ney. 75018 Paris. France KENWOOD LINEAR S.p.A.

20125, MILANO-VIA ARRE 50 ITALY

KENWOOD ELECTRONICS AUSTRALIA PTY LTD INCORPORATED IN NSWI

P.O. Box 504, 8 Figtree Drive, Australia Centre, Homebush, N.S.W. 2140, Australia

KENWOOD & LEE ELECTRONICS, LTD

Wang Kee Building, 4th Floor, 34-37, Connaught Road, Central Hong Kong